

CLAIMS

1 1. (Currently Amended) A method for use in a communication system, the
2 communication system including at least first, second and third gatekeepers each of
3 which communicates with respective subscriber terminals and each of which establishes
4 communication between its respective subscriber terminals, the method comprising
5 a the first gatekeeper receiving a request for information from one of its
6 associated subscriber terminals;

7 if the information is not known by the first gatekeeper, the first gatekeeper
8 sending the request only to a the second gatekeeper,

9 if the information is not known by said the second gatekeeper, the second
10 gatekeeper sending the request only to a the third gatekeeper, and

11 if the information is known by the third gatekeeper, the third gatekeeper sending
12 the information to the first gatekeeper.

1 2. (Original) The invention of claim 1 wherein the third gatekeeper sends the
2 information to the first gatekeeper via the second gatekeeper.

3. Canceled

4. Canceled.

1 5. (Currently Amended) The invention of ~~claim 3~~ claim 1 wherein the
2 requested information is an address.

1 6. (Original) The invention of claim 5 wherein said address is an application
2 address, a network address or a resource address.

7. Canceled

1 8. (Currently Amended) The invention of claim 1 ~~claim 3~~ wherein the
2 requested information is information about a resource.

1 9. (Original) The invention of claim 8 wherein each of said first, second and
2 third gatekeepers establishes communication between its respective subscriber
3 terminals.

1 10. (Original) The invention of claim 8 wherein said resource is one of:
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-
3 service parameter.

1 11. (Currently Amended) The invention of claim 1 ~~claim 3~~ wherein each of the
2 gatekeepers is adapted to use signaling messages conforming to International
3 Telecommunications Union standard H.323 to receive and transmit information
4 between at least itself and its respective subscriber terminals.

1 12. (Currently Amended) A gatekeeper for use in a communication system,
2 said gatekeeper comprising
3 a processor; and
4 a memory coupled to said processor, said memory storing instructions adapted
5 to be executed by said processor for performing the steps of:

6 (a) receiving at said gatekeeper from an associated communicating
7 terminal a request for information;

8 (b) if the requested information is known by said gatekeeper, providing
9 the requested information to said associated communicating terminal;

10 (a)(c) receiving at said gatekeeper from a second gatekeeper a request for
11 information that is not known by said gatekeeper;

12 (b) determining whether the information is known by said gatekeeper;

13 (e)(d) if the information is not known by said gatekeeper, sending the
14 request that was received from the via a second gatekeeper to a third gatekeeper;
15 all three of said gatekeepers being at a single gatekeeper hierarchical level; and

16 ~~(d)~~(e) receiving ~~the requested information~~ from the third gatekeeper the
17 information requested by the second gatekeeper; and
18 (f) sending to the second gatekeeper the information received from the third
19 gatekeeper.

1 13. Canceled

 14. Canceled.

1 15. (Original) The invention of claim 12 wherein the requested information is
2 an address.

1 16. (Original) The invention of claim 15 wherein said address is an application
2 address, a network address or a resource address.

1 17. (Original) The invention of claim 12 wherein the requested information is
2 information about a resource.

1 18. (Original) The invention of claim 17 wherein said resource is one of:
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-
3 service parameter.

1 19. (Currently Amended) The invention of claim 12 wherein said gatekeeper is
2 adapted to use signaling messages conforming to International Telecommunications
3 Union standard H.323 to receive and transmit information between itself and said
4 second and third gatekeepers ~~at least one other gatekeeper~~ and to communicate with
5 said ~~each~~ gatekeeper's associated communicating ~~entities~~ terminal.

1 20. (Previously Presented) A communication system comprising at least first
2 through third gatekeepers and a plurality of communicating entities, said first through
3 third gatekeepers being adapted to receive and transmit signaling messages among

4 themselves and each of the first through third gatekeepers being adapted to receive and
5 transmit signaling messages between itself and associated ones of the communicating
6 entities and each of the first through third gatekeepers being further adapted to establish
7 communication between said its associated communicating entities, wherein

8 said first gatekeeper directly communicates gatekeeper-to-gatekeeper
9 information request signaling messages only with said second gatekeeper,

10 said second gatekeeper directly communicates gatekeeper-to-gatekeeper
11 information request signaling messages with said first gatekeeper and said third
12 gatekeeper,

13 said third gatekeeper directly communicates gatekeeper-to-gatekeeper
14 information request signaling messages with said second gatekeeper but not with said
15 first gatekeeper,

16 said first, second and third gatekeepers all being at a single gatekeeper
17 hierarchical level within said communication system.

21. Canceled

1 22. (Original) The invention of claim 20 wherein ones of said gatekeeper-to-
2 gatekeeper signaling messages include requests for at least one of an application
3 address, a network address or a resource address.

1 23. (Original) The invention of claim 20 wherein ones of said gatekeeper-to-
2 gatekeeper signaling messages include requests for information about a resource.

1 24. (Original) The invention of claim 23 wherein said resource is one of:
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-
3 service parameter.

1 25. (Original) The invention of claim 20 wherein at least said gatekeeper-to-
2 gatekeeper signaling messages conform to an international standard for packet-based
3 communications.

1 26. (Original) The invention of claim 20 wherein at least ones of the
2 communicating entities are terminals, gateways, multipoint control units or
3 communication networks.

1 27. (Currently Amended) The invention of ~~claim 3~~ claim 1 wherein the first
2 gatekeeper is adapted to cache the information received by the first gatekeeper so that if
3 said first gatekeeper is again requested for said information, said first gatekeeper will be
4 able to provide said information to the source of the request.

1 28. (Previously Presented) The invention of claim 12 wherein said gatekeeper
2 is adapted to cache the information received from the third gatekeeper so that if said
3 gatekeeper is again requested for said information, it will be able to provide said
4 information to the source of the request.

1 29. (Previously Presented) The invention of claim 20 wherein each particular
2 gatekeeper that receives requested information from another one of the gatekeepers
3 stores that information within that particular gatekeeper so that if that particular
4 gatekeeper is again requested for said information, it will be able to provide said
5 information to the source of the request.

1 30. (New) A method for use in a communication system in which at least first,
2 second and third gatekeepers are each connected to one or more associated subscriber
3 terminals via one or more networks, in which each of the at least first, second and third
4 gatekeepers has a respective associated database, and in which each of the at least first,
5 second and third gatekeepers, in response to a request for information from a requesting
6 one of its associated subscriber terminals, provides the requested information from that
7 gatekeeper's associated database to the requesting subscriber terminal if that
8 gatekeeper's associated database contains the requested information, the method
9 comprising

10 the first gatekeeper receiving from a requesting one of its associated subscriber
11 terminals a request for information that is not contained in the database associated with
12 the first gatekeeper;
13 the first gatekeeper sending the request only to the second gatekeeper,
14 if the information is not contained in the database associated with the second
15 gatekeeper, the second gatekeeper sending the request only to the third gatekeeper, and
16 if the information is contained in the database associated with the third
17 gatekeeper, the third gatekeeper sending the information to the first gatekeeper.

1 31. (New) The invention of claim 30 wherein the third gatekeeper sends the
2 information to the first gatekeeper via the second gatekeeper.

1 32. (New) The invention of claim 30 wherein the requested information is an
2 address.

1 33. (New) The invention of claim 32 wherein said address is an application
2 address, a network address or a resource address.

1 34. (New) The invention of claim 30 wherein each of said first, second and
2 third gatekeepers establishes communication between its respective subscriber
3 terminals.

1 35. (New) The invention of claim 30 wherein the requested information is
2 information about a resource.

1 36. (New) The invention of claim 35 wherein each of said first, second and
2 third gatekeepers establishes communication between its respective subscriber
3 terminals.

1 37. (New) The invention of claim 35 wherein said resource is one of:
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-
3 service parameter.

1 38. (New) The invention of claim 30 wherein each of the gatekeepers is
2 adapted to use signaling messages conforming to International Telecommunications
3 Union standard H.323 to receive and transmit information between at least itself and its
4 respective subscriber terminals.